

May 27, 1946.

Dear Dr. Rittenberg,

You may be interested in the following results with dl-fluorophenylalanine (FPA).

1. It is not utilized in place of tyrosine by an E/ coli mutant which requires tyrosine for growth (and cannot use phenylalanine). It does not do this even in the presence of excess phenylalanine which can reverse the inhibitory effect of FPA.

2. The previous results showing an inhibition of growth reversible by phenylalanine are confirmed for wild type, and for phenylalanineless E. coli.

3. The inhibition is also reversed by tyrosine.

I should shortly have more data on the quantitative relationships between the inhibitor and the amino acid, and on other phases. (x Mrs. Fruton has supplied me with small samples of d- and l- phenylalanine, so that I withdraw my request for the resolved isomers. However I still think it would be highly desirable to have some resolved FPA, if this is at all possible. It seems to me that this method of the introduction of F- into aromatic rings may be of general application in preparing anti-metabolites, but until we can dissect the specific step that may be blocked there may not be much point in preparing them. Such a compound as fluoroproline would however be exceedingly interesting.

With best regards,

Sincerely yours,

Joshua Lederberg.